Minutes of spin meeting 05/02/07

Fanglei showed her spin tracking study around $G\gamma = 5$ with verious tune path. The tracking was done with 10% cold partial snake and 2.5 pi mm-mrad rms vertial emittance. By lowering the vertical tune, the effective resonance crossing rate is changed for the first resonance, hence the polarization loss. In addition, the lower the tune, the further away the two resonances, which helps to reduce spin coherence effect. If the high acceleration rate can be applied here, the polarization loss would be less than 0.5%. The resonance strength extracted from spin tracking with various acceleration rate is similar. Overall, the lower tune can gain 3-5% polarization. Leif suggested to change the tune path on the second resonance to see if any effect can be seen. Haixin suggested to repeat the tracking with this year's lattice (14% cold partial snake), which may need to pull the tune even further down.

Haixin gave a brief update on AGS proton setup progress. The focus of next a few days will be to increase intensity and raise tunes. Since both tunes are high now, the beam loss could be associated with both of the planes. One can judge this by check the tunes, harmonics, and beam loss. Leif is going to write a short recipe for the AGS loss monitor display.

Mei reported the progress on ORM data analysis done by her and Vincent. The snake on/off data would lay on top of each other if this year's tune was choosen as 8.974 instead of the measured 8.944. The χ^2 is also minimum with this tune setting. Leif did fit a few sets data and saw good fit with 8.94 tune with his simple 9th harmonic fitting. So we still have more questions than answers.

Haixin